

Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 5

Complete if Known

Application Number 09/779,693
Filing Date February 7, 2001
First Named Inventor Rothbard, Jonathan B.
Group Art Unit 4614 1614
Examiner Name Unassigned
Attorney Docket Number 019801-000110US

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
PG	A	4,532,207		Brewer et al.	07-30-1985	
	B	4,631,190		Shen et al.	12-23-1986	
	C	4,046,722		Rowland	09-06-1977	
	D	4,701,521		Ryser et al.	10-20-1987	
	E	4,847,240		Ryser et al.	07-11-1989	
	F	4,880,911		Brewer et al.	11-14-1989	
	G	5,028,707		Nichols et al.	07-02-1991	
	H	5,162,505		Dean et al.	11-10-1992	
	I	5,354,844		Beug et al.	10-11-1994	
	J	5,362,831		Mongelli et al.	11-08-1994	
	K	5,633,230		Twist et al.	05-27-1997	
	L	5,646,120		Sumner-Smith et al.	07-08-1997	
	M	5,674,849		Twist et al.	10-07-1997	
	N	5,716,614		Katz et al.	02-10-1998	
	O	5,783,178		Kabanov et al.	07-21-1998	
	P	5,789,531		Sumner-Smith et al.	08-04-1998	
	Q	5,795,909		Shashoua	08-18-1998	
	R	5,831,001		Twist et al.	11-03-1998	
	S	5,977,163		Li et al.	11-02-1999	
	T	6,077,835		Hanson et al.	06-20-2000	

class/subcls

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
PG	U	CA	2,094,658		Sumner-Smith et al.	10-24-1993		
	V	EP	EP 0 009 498		Ryser et al.	06-27-1984		
	W	EP	EP 0 599 303		Fukuta et al.	11-25-1993		
	X	JP	JP 10 0095738		Muramoto et al.	04-14-1998		
	Y	PCT	WO 01/13957		Rothbard et al.	03-01-2001		
	Z	PCT	WO 79/00515		Ryser et al.	08-09-1979		
	AA	PCT	WO 91/09958		Frankel et al.	07-11-1991		

Translation

Examiner
Signature

PG

Date
Considered

5/27/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

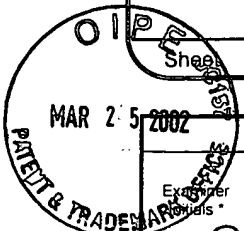
Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

WC 9037812 v1

TECH CENTER 1600/2900

MAR 26 2002

RECEIVED



Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **2** of **5**

Complete if Known

Application Number: 09/779,693
Filing Date: February 7, 2001
First Named Inventor: Rothbard, Jonathan B.
Group Art Unit: 1614 / 1614
Examiner Name: Unassigned / D. Jones
Attorney Docket Number: 019801-000110US

MAR 25 2002
RECEIVED
PATENT CENTER 1600P2900

RECEIVED

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
D Jones	AB	PCT	WO 92/07871	/	Sumner-Smith et al.	05-14-1992		
	AC	PCT	WO 93/04701	/	Wu et al.	03-18-1993		
	AD	PCT	WO 93/21941	/	Twist et al.	11-11-1993		
	AE	PCT	WO 94/04686	/	Barsoum et al.	03-03-1994		
	AF	PCT	WO 94/14464	/	Twist et al.	07-07-1994		
	AG	PCT	WO 95/11038	/	Twist et al.	04-27-1995		
	AH	PCT	WO 96/21036	/	De Polo et al.	07-11-1996		
	AI	PCT	WO 97/33552	/	Li et al.	09-18-1997		
	AJ	PCT	WO 97/40854	/	Summerton et al.	11-06-1997		
	AK	PCT	WO 98/52614	/	Rothbard et al.	11-26-1998		

class/sub
1
↓

Examiner Signature

D Jones

Date Considered

5/27/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for

Patents, Washington, DC 20231
WC 9037812 v1

Please type a plus sign (+) inside this box →



PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 5

Complete if Known

Application Number 09/779,693
Filing Date February 7, 2001
First Named Inventor Rothbard, Jonathan B.
Group Art Unit 1614
Examiner Name Unassigned
Attorney Docket Number 019801-000110US

RECEIVED
MAR 2 6 2002
TECH CENTER 1600/2900

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
AL	109	Arbuck, S.G., et al., "Taxol: Clinical Results and Current Issues in Development," Chapter 14 in <u>Taxol: Science and Applications</u> , Suffness, M., (Ed.) CRC Press, New York NY, pp. 379-415 (1995).
AM		Balicki, D., et al., "Histone H2A Significantly Enhances In Vitro DNA Transfection," <u>Molec. Med.</u> 3:782-787 (1997).
AN		Boussif, O., et al., "A versatile vector for gene and oligonucleotide transfer into cells in culture and <i>in vivo</i> : Polyethylenimine," <u>Proc. Natl. Acad. Sci.</u> 92:7297-7301 (1995).
AO		Brugidou, J., et al., "The <i>Retro-Inverso</i> Form of a Homeobox-Derived Short Peptide in Rapidly Internalised by Cultured Neurons: A New Basis For An Efficient Intracellular Delivery System," <u>Biochem. Biophys. Res. Comm.</u> 214:685-693 (1995).
AP		Burton, K.A., et al., "Basic polyelectrolytes and protein transport across the new-born pig intestine," <u>Phys. Soc.</u> 211(2): 27P-28P (1970).
AQ		Buschle, M., et al., "Transloading of tumor antigen-derived peptides in antigen-presenting cells," <u>Proc. Natl. Acad. Sci.</u> 94:3256-3261 (1997).
AR		Chen, J., et al., "Galactosylated Histone-Mediated Gene Transfer and Expression," <u>Human Gene Ther.</u> 5:429-435 (1994).
AS		DATABASE WPI Section CH, Week 199825 Derwent Publications Ltd., London, GB; Class A23, AN 1998-280379 XP002167568 & JP 10 095738 a (TTS GIJUTSU KENKYUSHO KK), 12 April 1998 (1998-04-14) abstract
AT		de Bont, D.B.A., et al., "Synthesis and Biological Activity of Beta-Glucuronyl Carbamate-Based Prodrugs of Paclitaxel as Potential Candidates for ADEPT," <u>Bioorganic & Med. Chem.</u> 5:405-414 (1997).
AU		Derossi, D., et al., "The Third Helix of Antennapedia Homeodomain Translocates through Biological Membranes," <u>J. Bio. Chem.</u> 269:10444-10450 (1994).
AV		Devlin, T., et al., "Textbook of Biochemistry," (Wiley-Liss) 3rd Ed., pp. 974-975 (1992).
AW		Elferink, J.G.R., "Changes of Plasma Membranes Permeability in Neutrophils Treated with Polycations," <u>Inflammation</u> 15:103-115 (1991).
AX		Emi, N., et al., "Gene Transfer Mediated by Polyarginine Requires a Formation of Big Carrier-Complex of DNA Aggregate," <u>Biochem. Biophys. Res. Comm.</u> 231:421-424 (1997).
AY		Fawell, S., et al., "Tat-mediated delivery of heterologous proteins into cells," <u>Proc. Natl. Acad. Sci.</u> 91:664-668 (1994).

Examiner Signature

[Handwritten Signature]

Date

Considered

5/27/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
WC 9037812 v1

Please type a plus sign (+) inside this box →



PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 4 of 5

Complete if Known

Application Number 09/779,693
Filing Date February 7, 2001
First Named Inventor Rothbard, Jonathan B.
Group Art Unit 1614 1616
Examiner Name Unassigned D. Song
Attorney Docket Number 019801-000110US

RECEIVED
MAR 2 6 2002
FBI CENTER 1600/2900

RECEIVED
MAR 2 6 2002

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
<u>WJ</u>	AZ	Fletcher, M.D., et al., "Partially Modified Retro-Inversa Peptides: Development, Synthesis and Conformational Behavior," <u>Chem. Rev.</u> 98:763-795 (1998).
	BA	Georg, G.I., "The Medicinal Chemistry of Taxols", Chapter 13 in <u>Taxol: Science and Applications</u> , Suffness, M., (Ed.), CRC Press, New York NY, pp. 317-375 (1995).
	BB	Golik, J., et al., "Synthesis and Antitumor Evaluation of Paclitaxel Phosphonooxymethyl Ethers: A Novel Class of Water Soluble Paclitaxel Pro-Drugs," <u>Bioorganic & Med. Chem. Letters</u> 6: 1837-1842 (1996).
	BC	Greenwald, R.B., et al., "Drug Delivery Systems: Water Soluble Taxol 2'-Poly (ethylene glycol) Ester Prodrugs - Design and <i>in vivo</i> Effectiveness," <u>J. Med. Chem.</u> 39:424-431 (1996).
	BD	Hamy, F., et al., "An inhibitor of the Tat/TAR RNA interaction that effectively suppresses HIV-1 replication," <u>Proc. Natl. Acad. Sci. USA</u> 94:3548-3553 (1997).
	BE	Kessler, H., "Peptoids-A New Approach to the Development of Pharmaceuticals," <u>Angew. Chem. Int. Ed. Engl.</u> 32:543-544 (1993).
	BF	Khmelnitsky, Y., et al., "Generation of Solution-Phase Libraries of Organic Molecules by Combinatorial Biocatalysis," (Mol. Div. Comb. Chem.), <u>Am. Chem. Soc.</u> , pp. 144-157 (1996).
	BG	Kingston, D.G.I., "Natural Taxoids: Structure and Chemistry," Chapter 12 in <u>Taxol: Science and Applications</u> , Suffness, M.,(Ed.), CRC press, New York NY, pp. 287-315 (1995).
	BH	Lam, K.S., "The 'One-Bead-One-Compound' Combinatorial Library Method," <u>Chem. Rev.</u> 97:411-448 (1997).
	BI	Mauersberger, B., et al., "Studies on the cytotoxicity of poly-L-arginine, poly-L-lysine and DEAE-dextran in L-cells and mouse embryonic fibroblasts," <u>Exp. Pathol.</u> (JENA) 13:268-273 (1997).
	BJ	Murphy, J., et al., "A combinatorial approach to the discovery of efficient cationic peptoid reagents for gene delivery," <u>Proc. Natl. Acad. Sci.</u> 95:1517-1522 (1998).
	BK	Natsume, H., et al., "Screening of Absorption Enhancers for Nasal Peptide and Protein Delivery," <u>Proc. Int. Symp. Controlled Release Biocat. Mater.</u> , pp. 481-482, (1996).
	BL	Nicolaou, K.C., et al., "Design, synthesis and biological activity of protaxols," <u>Nature</u> 364:464-466 (1993).
	BM	Rodi et al., "Screening of a Library of Phage-displayed Peptides Identifies Human Bcl-2 as a Taxol-binding Protein," <u>J. Mol. Bio.</u> , 285:197-203, (1999). abstract
<u>WJ</u>	BN	Rodrigues, M., et al., "Synthesis and beta-lactamase-mediated activation of a cephalosporin-taxol prodrug," <u>Chem. & Bio.</u> 2:223-227 (1995).

Examiner Signature <u>[Signature]</u>	Date Considered <u>5/27/03</u>
--	-----------------------------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
WC 9037812 v1

Please type a plus sign (+) inside this box →



PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 5

Complete if Known

Applicant Number 09/779,693
Filing Date February 7, 2001
First Named Inventor Rothbard, Jonathan B.
Group Art Unit 1614 / 1614
Examiner Name Unassigned
Attorney Docket Number 019801-000110US

MAR 26 2002
RECEIVED
CENTER 1600/2000

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
BO	BO	Rose, W.C., "Preclinical Antitumor Activity of Taxanes," Chapter 8 in <u>Taxol: Science and Applications</u> , Suffness, M., (Ed.), CRC Press, New York NY, pp. 209-235 (1995).
BP	BP	Sigma Catalog, pp. 1715 & 1721, 1991
BQ	BQ	Simon et al., "Peptoids: A modular approach to drug discovery," <u>Proc. Natl. Acad. Sci.</u> 89:9367-9371 (1992).
BR	BR	Straubinger, R.M., "Biopharmaceutics of Paclitaxel (Taxol): Formulation, Activity, and Pharmacokinetics," Chapter 9 in <u>Taxol: Science and Applications</u> , Suffness, M., (Ed.), CRC Press, New York, NY, pp. 237-258 (1995).
BS	BS	Sumner-Smith, M., et al., "Antiherpetic activities of N- α -acetyl-non-D-arginine amide acetate," <u>Chem. Abs.</u> vol. 123, No. 7, ABS. No. 79357 (1995).
BT	BT	Thompson, L.A., et al., J.A., "Synthesis and Applications of Small Molecule Libraries," <u>Chem. Rev.</u> 96:555-600 (1996).
BU	BU	Tzan, C.J., et al., "Modification of epithelial permeability by cationic polypeptides," <u>Am. J. of Physiology Soc., Cell Physiology</u> , American Physiological Society, US, Vol. 265, No. 6, PART 01, 1993, pp. C1637-C1647, XP000953297 ISSN: 036306143 abstract
BV	BV	Uchida, M.D., et al., "Polycations Decrease the Transepithelial Resistance of Cultured Tracheal Epithelial Cells," <u>CHEST</u> 101: (suppl.):33S (1992).
BW	BW	Ueda, Y., et al., "Novel Water Soluble Phosphate Prodrugs of Taxol Process <i>in vivo</i> Antitumor Activity," <u>Bioorganic & Med. Chem. Letters</u> 3:1761-1766(1993).
BX	BX	Ueda, Y., et al., "Synthesis and Antitumor Evaluation of 2'-Oxycarbonylpaclitaxels (Paclitaxel-2'-Carbonates)," <u>Bioorganic & Med. Chem. Letters</u> 4:1861-1864 (1994).
BY	BY	Vyas, D.M., et al., "Phosphatase-Activated Prodrugs of Paclitaxel," Chapter 9 in <u>Taxane Anticancer Agents</u> , American Chemical Society, Washington D.C., pp. 124-137 (1995).
BZ	BZ	Vyas, D.M., et al., "Synthesis and Antitumor Evaluation of Water Soluble Taxol Phosphates," <u>Bioorganic & Med. Chem. Letters</u> 3:1357-1360 (1993).
CA	CA	Zuckermann, R.M., et al., "Efficient Method for the Preparation of Peptoids [Ogio(N-substituted glycines)] by Submonomer Solid-Phase Synthesis," <u>Chem. Soc.</u> 114:80-83 (1992).

Examiner Signature		Date Considered	5/7/03
--------------------	--	-----------------	--------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
WC 9037812 v1